

# Measuring Disaster Risk Around Portland College Campuses

## Earthquakes and urban resiliency

Across the globe, urban areas are at risk to the hazards posed by destructive earthquakes. Within these urban societies, this hazard is **unfairly** distributed throughout the people of the cities based on social, economic, and political structures [5]. Earthquakes as disasters are very dangerous due to their **sudden onset** and **unpredictability** [3]. Becoming resilient to earthquakes, entails successful coping strategies with the event rather than avoiding the event [4]. Planning on **how to recover** highlights earthquake resiliency in urban areas.

How can we plan for, and respond to, the impacts earthquakes have on structures in urban areas?



Portland, Oregon, has seen some pretty big EQ's...

Problem is, the last one happened before Portland was built. Ignorant to the threat for so long, the city's residents, infrastructure and resources are extremely vulnerable [2].



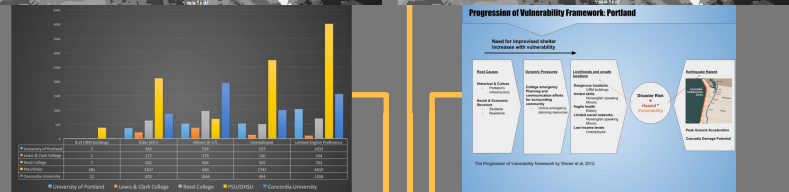
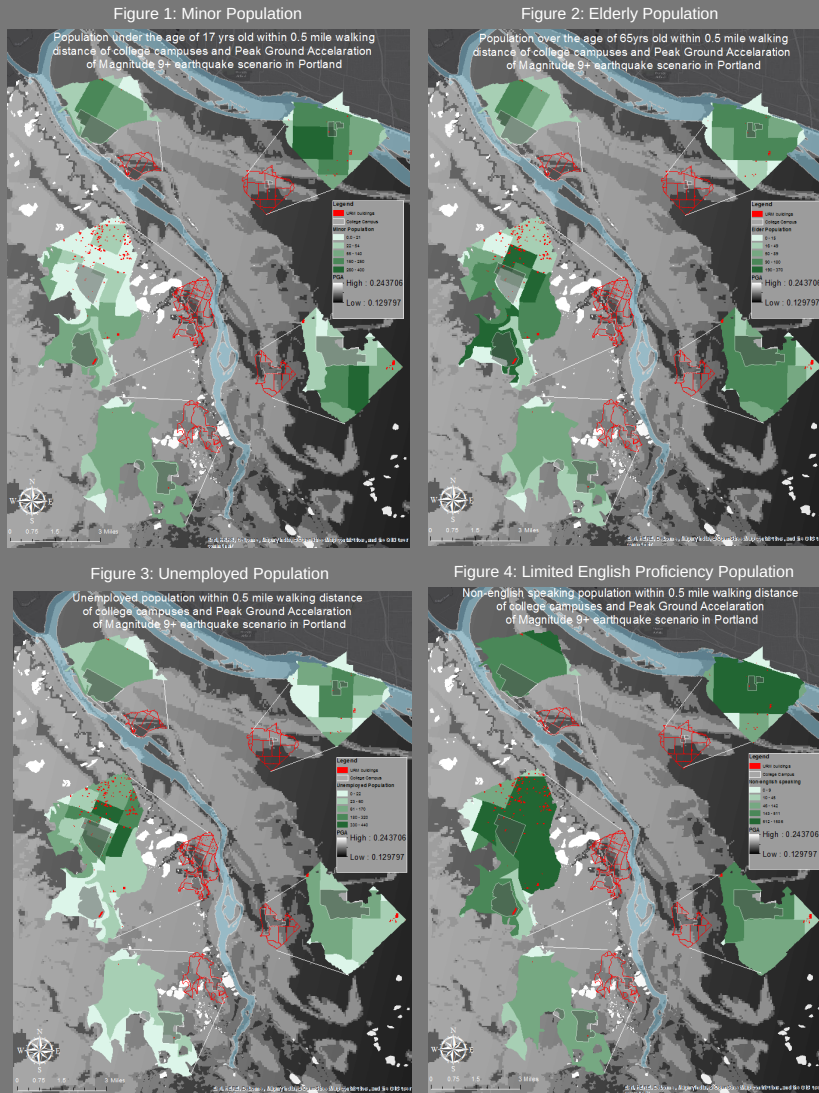
A large Cascadia earthquake would absolutely **devastate** the Pacific Northwest, Oregon, and Portland. We know the buildings pose significant hazards and opportunities for vulnerable populations... what can we do?

College campuses have a key and perceivable role in communities. If a large number of residents in the surrounding area are without food, shelter, or water, they will begin seeking these basic survival needs [1].



How is the earthquake risk distribution around Portland college campuses impacting the need for improvised shelter structures?

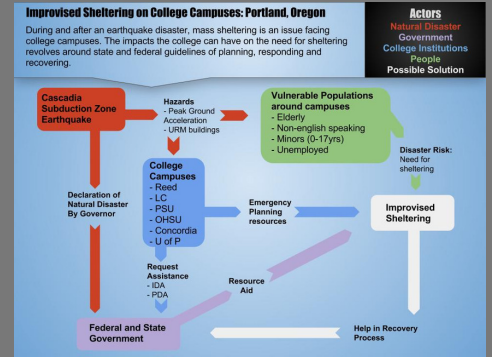
Findings



LC - UP - Reed - Concordia - PSU/OHSU  
Least Need for improvised shelter structures Greatest

Understanding the vulnerable populations is a key aspect of urban resilience and is **applicable** in many urban areas across the world. Portland offers a **unique** perception into proving safety for vulnerable populations through the use of college campuses as possible improvised shelter structures.

The college campus as an **actor** in the city wide recovery of an earthquake disaster.



## Back to Earthquakes and urban resiliency

Policy recommendations, would be to have the emergency management resources of Colleges have multiple language options, so that more students and community members can be **thoroughly** informed of risks and procedures. In process of acquiring safety, the solutions lie in addressing these **societal** pressures imposed on vulnerable populations. **Finally**, this project has shown the ability of institutions to be agencies of strength and resilience for themselves and the communities around them.

### Bibliography:

- [1] Blaikie, P., Cannon, T., Davis, I., and Wisner, B.: At Risk: Natural Hazards, People's Vulnerability, and Disasters, Routledge, London, 1994.
- [2] Oregon Seismic Safety Policy Advisory Commission, Oregon Resilience Plan
- [3] Peduzzi et al. (2009). "Assessing global exposure and vulnerability towards natural hazards: the Disaster Risk Index." Natural Hazards and Earth System Sciences 9, no. 4: 1149-1159.
- [4] Smith, K. 1992. Environmental hazards: assessing risk and reducing disaster. Routledge, London, UK.
- [5] Wisner, Ben , JC Gaillard and Ilan Kelman , "Framing Disaster" , in The Routledge Handbook of Hazards and Disaster Risk Reduction ed. Ben Wisner , JC Gaillard and Ilan Kelman . (Abingdon: Routledge, 13 Dec 2011 ), accessed 07 Apr 2017 , Routledge Handbooks Online.